

## Who Is the Right Fit? Doing Diversity in Translational Research

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### Abstract

The growing field of clinical and translational science (CTS) is located at the intersection of academic medicine and industry, sectors that share histories of exclusion and efforts to become more diverse. Indeed, diversity and inclusion of a broad range of experts and backgrounds are believed to be critical to continuous innovation and the growth of the US health industry. But despite an increasing emphasis on diversity in CTS research, and the requirement that federally funded US academic institutions demonstrate their ability to recruit individuals from historically underrepresented groups as identified by gender, race, and ethnicity, interventions aimed at integrating difference fall short of dismantling longstanding structures that normalize gendered orientations towards innovation and scientific progress. This paper investigates how diversity is operationalized in a CTS program in a large US research university. From an intersectional feminist standpoint, we focus on day-to-day practices and the institutional cultures and policies that inform views of innovative translational research and scientific progress. Asking what emerges as the value of efforts to diversify CTS, we found that while almost everyone was working towards increasing diversity, most CTS

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leaders considered diversity as a balancing factor for team functionality or an enabling factor for innovation based on assumptions about what diverse actors will bring to the table, as opposed to a political concern. Consequently, CTS researchers operationalized the term *diversity* based on gender stereotypes, while others considered it irrelevant in a meritocracy. We show how these perspectives impacted actors deemed diverse in the medical technology innovation context. As in other fields, more profound mechanisms are necessary to effect institutional change beyond the confines of stereotyping.

## Introduction

Clinical and translational science (CTS) has been construed by funders and research institutes as a team effort to translate science into clinical care, requiring coordination of targeted expertise to bring the fruits of the “bench” to the “bedside.” The “translational pipeline” begins with basic research and culminates in clinical application, which often relies on commercialization (Zerhouni, 2006, p. 172). This metaphor emphasizes the goal of expedience in moving scientific discoveries from the laboratory in the academic setting into the clinical domain as quickly as possible. In an economic sense, translation refers to the idea of “redesign[ing] biomedical research in order to accelerate the process whereby publicly funded science is turned into applications and especially products” (Robinson, 2017, p. 250). Robinson (2017) identifies a complex “translational supply chain” (p. 251) as translational research engenders the large-scale commercialization of knowledge. By using the metaphor of the pipeline, translational research is constructed as a direct pathway to improved health that can circumvent the potential obstacles that could slow down progress. Thus, translational researchers are defined in part by their ability to work with others in providing seamless productivity as part of a coordinated team. So important is this goal that engagement and incorporation of “team science” is required of the multimillion-dollar National Institutes of Health (NIH) clinical and translational science awards given to the top research universities in the United States (NIH, n.d.).

In the CTS context, a new research field called “Science of Team Science” (SciTS) has emerged, emphasizing psychological approaches to optimize teamwork (Bozeman & Boardman, 2014; Falk-Krzesinski et al., 2011; Salazar, Lant, & Fiore, 2012; Stokols, Hall, Taylor, & Moser, 2008).<sup>1</sup> At the heart of team science is the fundamental expectation that “diversity,” or the coalescing of individuals with different backgrounds and expertise, will result in faster, more successful translation of basic research. Bypassing the notion that teams are necessarily

contextual endeavors hinging not just on combinations of individuals but on social environment, location, and culture, this assumption draws upon organization and management studies that highlight the higher productivity of socially diverse teams, particularly through equal participation of men and women (Bear & Woolley, 2011; Joshi, 2014), as well as on studies that compare the quality and applicability of innovations produced by homogeneous versus heterogeneous collaborators (European Commission, 2013; Schiebinger & Schraudner, 2011).

These literatures suggest that intentionally fostering diversity on teams results in an “innovation dividend” (Nielsen et al., 2017, 1740). Indeed the NIH (2018), the largest US funder of scientific and biomedical research, has introduced “diversity catalyts” as part of their national “hubs of innovation” initiative. Describing diversity as “good for health, good for the economy,” the NIH Office of the Director (2016) states in its strategic plan that expanding the STEM talent nationally will create “new knowledge, technologies and products that meet the needs of a diverse America.” Grounded in political struggles to intervene on the long histories of inequality in science, technology, engineering, and math (STEM), the NIH began to require the inclusion of women and minority researchers in training and research in the early 1990s (Epstein, 2007). But beyond combatting inequity, inclusion of diversity in expertise and background are now viewed as critical components of innovation itself.<sup>2</sup> US research institutions, funders, and scholars increasingly articulate diversity as an economic factor (Urciuoli, 2016). Women and ethnic and racial minorities who are underrepresented in STEM are thought to add value in creativity, the core fuel of innovation, and are thus ultimately believed to be essential to financial success in global markets (Du Chatenier, Verstegen, Biemans, Mulder, & Omta, 2009; Forbes, 2011). This emphasis has resulted in institutional pressure for STEM programs, including those in CTS, to increase the participation of historically underrepresented groups.

Gender disparity in US innovation, in particular in Silicon Valley, has been hotly debated in the media as data suggest that little progress has been made towards equity (Bell & Chetty, 2018). Yet few have empirically investigated how diversity is operationalized in practice—that is, “what diversity does” (Ahmed, 2012, p. 1) in the US STEM context (Subramaniam, 2014). In this article, we draw on ethnographic research of a medical innovation program to show how clinical and translational researchers operationalize diversity, and how the increasingly paradigmatic notion of “purposeful” diversity in collaborative CTS projects is undercut by essentializing or stereotyping ideas about identity and social

difference. We highlight how these ways of doing diversity impact innovator trajectories, and argue that institutional cultural change is needed to redress calcified understandings of gender and its value in innovation. These shifts are critical for the inclusion and retention of differently positioned social actors.

## Studying Inclusion In Situ: Methods and Field Site

This article draws upon an ethnographic case study, conducted between 2015 and 2017, of an academic innovation program we call Med-Tech at a major US research university. At the time of our research, Med-Tech had been in existence for fifteen years and had resulted in dozens of medical technology companies and health technology patents. Considered an overwhelming success by the NIH, the university, and its commercial partners, Med-Tech exemplifies the often-cited “culture of cooperation” needed for sustained innovation in CTS, and the paradigm of porous boundaries between clinic, academy, and industry (Zerhouni, 2006, p.171). In this ethnographic project, which was funded through the NIH’s Clinical and Translational Science Awards Program, we were invited to explore issues related to practices of team science and collaboration in academic entrepreneurship. We were given broad access to Med-Tech faculty, students, and collaborators, and were free to ask questions and talk with program affiliates as they were available. We were also given permission to observe most team meetings and select leadership meetings, including those involving program admission decisions, onboarding sessions for new students, and team presentations to industry mentors and investors. This research was approved by our university Institutional Review Board.

Med-Tech considers as the key to its success its grounding in the tenets of design thinking, a solution-focused method for problem solving developed in engineering and industrial design that is now used synonymously with innovation (Wilf, 2019). In the program’s yearlong fellowship, multidisciplinary teams of clinicians, engineers, and business experts work together to develop new health-related devices, systems, methods, patents, or solutions. Med-Tech approaches innovation as a process that should be driven by needs that are empirically identified in clinical environments rather than through technology development. Fellows are granted access to the university medical center for intensive research, including interviews and observations of clinicians and patients, to identify clinical needs. This approach requires close coordination with clinical departments that is facilitated by the clinician-technologists who make up Med-Tech’s faculty. At the core of the Med-Tech approach are multidisciplinary teams of four fellows that convene for a nine-month fellowship to create a solution to a clinical need that

can be incubated in the academic environment during the fellowship period, and eventually ushered into the marketplace. These teams are carefully selected to satisfy distinct social roles such as “builder,” “deep thinker,” and “project manager.”

Tasked as embedded ethnographers to understand and identify mechanisms that enhance team science in the translational context, we entered a space from which women and ethnic/racial minorities have been largely absent. The ongoing debate on increasing diversity in the program gave us an opportunity to study how this concept was constructed through our participants’ reflections and practices. We journaled fieldnotes that addressed these issues, including questions about how to study gender diversity as an absence that seemed to constantly be present for everyone (M’charek, Schramm, & Skinner, 2014; Smith, 2005), our ambiguities about the “counting” of bodies entailed in doing diversity (Ahmed, 2012, 17),<sup>3</sup> and questions about the impact of our presence at Med-Tech—as ethnographers, ethicists, women, and often as perceived auditors who warrant caution.

## Purposeful Diversity: Finding the Right Fit

Med-Tech faculty, who mostly hold appointments in surgery departments, reflect the gender and racial and ethnic composition of medical school faculty in the US, comprised mostly of white men (Carr, Carr, Gunn, Kaplan, Raj, & Freund, 2015; Jolliff, Leadley, Coakley, & Sloane, 2012). Women of different ethnic and racial backgrounds administer the day-to-day activities of the program. Med-Tech, like much of academic medicine and bioengineering, has a starkly gendered division of labor. Program leaders have worked toward increasing the numbers of women by offering mentorship opportunities and other engagements, yet have not included a woman into its core faculty. In terms of its fellowship program, Med-Tech has had predominantly white male fellows, but, prompted by feedback, has recently taken steps to increase the number of women and minority applicants through targeted outreach.

Priding itself on its careful fellow candidate selection process to choose not just future leaders in medical innovation but engaged team workers who can eventually convince venture capitalists of their potential, Med-Tech has cycled through a range of strategies for team combinations. In our first year of research, three of twelve fellows were women; all three were white engineers. In our second year, six of eleven fellows were women, and, for the first time in the fifteen-year history of the fellowship program, outnumbered men. In that year, half of women fellows were physicians, the other half engineers or designers, and five of them

were white. While in year one the women were dispersed evenly onto the three teams, in year two they made up half of the members on each team of four fellows. The contrasting gender balance across our two years of research aided our inquiry into how gender surfaced in team dynamics. The context of our study privileged gender over other kinds of social difference. But as gender became an important primary marker of diversity for the program, it was inevitably caught up in other aspects of identity such as race, class, and sexuality that we conceive of as the intersectional dimensions of a necessarily relational category.

In an interview, a physician and entrepreneur who teaches at Med-Tech named Ronald,<sup>4</sup> shared his perspective on what diversity means for team members in medical innovation:

You really need to think purposefully about why differences may actually be helpful...so they kind of fit. Just for the sake of diversity...I don't think that's important. You'd actually need purposeful diversity for different types of things. You might want women...because they bring something very different...in terms of understanding a disease state or a different way of looking at engineering.

Prompted to reflect on diversity, Ronald articulated a strategic perspective we found ubiquitous in CTS. Diverse people, understood to be those who deviate from the contextual norm, should not be included on political grounds,<sup>5</sup> but because they represent a category that brings something *specific* to an innovative project that then improves the project itself. It is this specificity of what they bring that makes them the right fit for a collaboration.

Far from unique to Med-Tech, nor ever a uniform process, assessing somebody's fit for an innovation team entails subjective and discretionary aspects that faculty negotiate beyond the expected excellent credentials of applicants. When asked about this process, Med-Tech faculty Matt, a physician-entrepreneur, told us, "There's a phenotype we recruit for. It's all part of what makes this place work as an ecosystem...it's this ability to tap in." Across the board, Med-Tech faculty emphasize the importance of fellows being the right fit for innovative collaboration, entrepreneurship, and particular teams. Med-Tech faculty and surgeon David explained,

I would say that we are working really hard to get more women into the program because we think that makes a difference...Last year in the class, our algorithm for placing the teams, we realized after we'd run it that it didn't include gender as a factor and we ended up with

teams that were not really very balanced. So one team had three women and then several had none.

When we inquired into the meaning of balance, David referred to the example of the role of one of the women on a previous year's team:

She had a way of doing things that was different than the way that we were managing things, whether it's her personality or whether it's because she was a woman, I don't know...She had a way of lowering the intensity and the emotions in the conflict that was very beneficial to us, of reducing the amount of drama that was going on.

For David, the value of diversity in building a balanced team is explained in terms of stereotypical gendered views of the ability of women to neutralize conflict. Conceiving of diversity as something more broad, Ronald views diversity's importance for innovation as capturing perspectives that are missing. Both views presume women as a group with identifiable social characteristics, an idea that feminists have worked for more than five decades to break down (see Lorde, 1984; Mohanty, 1991; Moore, 1988; Reiter, 1975). In particular, associations of gender with specific qualities—and expectations of these traits in specific people—have long been revealed as socio-historical and cultural phenomena (see Abu-Lughod, 1986; Butler, 1990; de Beauvoir, 1952; Lutz, 1988; Rosaldo & Lamphere, 1974; Strathern, 1988). Feminists showed that ideas about gender as universal and separable from phenomena like race, class, or sexuality were categorical fantasies that make invisible the complexly entwined experiences of women of color, often in conjunction with colonialist histories (see Crenshaw, 1991; Spivak, 1988). In reaction to the universalizing of white middle-class women's experiences in the US, intersectional feminist theorists approach gender as a relational and dynamic category to analyze practices, phenomena, and experiences entangled with expectations or stereotypes about ethnicity, race, class, sexuality, and other identity signifiers (see Collins, 2000; Davis, 1981; Ferguson, 2004; Glenn, 2004; hooks, 1981; Spade, 2013). In essentializing differences between men and women, our respondents elided these intersectional dimensions of identity.

In contrast to these views that simply follow sexist stereotypes, program faculty Martin contradicted David and told us that gender was not a factor in constructing these teams: "When we put the teams together based on their background, it turns out, all three of them were engineers, and so as a result they were of similar expertise and so we spread them out onto different teams." Martin also considers

balance important, but for him what matters is a balance of expertise on teams.

**Diversity as balance or as threat to meritocracy.** Med-Tech's leaders emphasize not just the candidates' excellence and experience, but the importance of particular traits they see as conducive for the entrepreneurial, risky, and fast-paced innovation environment they operate in. They cite these traits as drive, flexibility, passion, "hunger," as well as social and teamwork skills. Beyond a diversity of expertise, they look for personalities that will fit together for optimal collaborative outputs. Martin told us, "it's all gut hunger—it's all the desire to try and figure something [out] and solve it...like, hey man, I can sell anything...is probably not the right fit for what we believe." Martin pinpoints a creative curiosity, an urge for innovative solutions that goes beyond marketing expertise as crucial for team members. For David, however, women—qua testosterone levels—make teams better:

If you add a woman on a team of three men, I felt that it would tend to make that team a little more efficient and focused and balanced in a way than I haven't seen as much if it's only men. I feel that by having a minimum component of women to men in the team, it does make things...It feels like it reduces a little bit of the drama-testosterone. When we're looking at incoming fellows, I will advocate pretty strongly on making sure we have at least a woman on each team...I think we really believe that gender diversity is an important factor...a really great thing to have.

Gender diversity serves as natural antidote to men who are unproductive because of their testosterone. For Ronald, adding diverse perspectives is valuable when it serves a purpose, but what is more essential is that team members fit with one another: "sometimes you want experiences, but if you have so many people who are different...people can't identify with one another." The right fit can mean that team members must be similar enough to be able to identify with one another; in other words, those who are too different are excluded. Diversity and sameness thus have to be balanced in multiple ways: on the one hand, difference should be incorporated, but too much of it threatens the cohesion that is necessary for productive innovation. Other faculty second the idea that too much difference disrupts team-based innovation, arguing that diversity can disturb the flow of collaboration when team members cannot communicate with one another and when too much bridging is required. The right fit is framed by faculty as tied to particular team contexts, as tailoring a specific team with distinct skill sets and experience. Yet this elides the issue that teams are the product of larger structural

processes: they have tended to be male, white, and middle class.

Like many academic institutions, Med-Tech considers balance and fit in a larger, ideally meritocratic environment. Martin rightly says that Med-Tech has been “faced with a challenge that many other programs are faced with, and that is we are not trying to be gender specific, you know, we’ll take the top six women and top six men, we’re looking to take the top candidates.” He reiterates the ideal of the university as a meritocratic institution, in which background societal structures should not play a role, while these same institutions and their funding agencies also increasingly require the numerical inclusion of diverse actors as identified by gender, ethnicity, age, and other factors. In the program, like in the academy in general, merit, excellence, and fit are the basis of candidate selection, as Martin here summarizes by the term “top candidates.” This process is not one of balancing teams, but of finding entrepreneurs and innovators more broadly.

In fact, despite the clearly visible impact of histories of exclusion on the contemporary program, Carter, who is another Med-Tech leader, told us, “Race and ethnicity, and you know, gender type or whatever, sorry, but that’s irrelevant. It’s utterly irrelevant. You know, if we get twelve Asian women next year, that’s fine, you know! If we get twelve white guys, that’s fine.” In Carter’s view, social characteristics do not matter because they should not matter in a meritocracy. This stance—an effectual blindness to intersecting histories of exclusion and these histories’ impact on the present—justifies why the program looks the way it looks and expresses what has been theorized as colorblindness (Bonilla-Silva, 2006; Reardon, 2004). For Carter it marks the rejection of measures to make the program more diverse. He articulates diversity as a “politically correct” idea that must not impact the process of selecting the next generation of innovators.

Indeed Carter’s statement illustrates the need for an intersectional approach to diversity: the program has in fact mostly consisted of white male cohorts, year after year, but has included Asian and Asian American men proportional to their representation in STEM fields in the US. Yet there was never a year in which “twelve Asian women” were selected. This outcome would indeed be nothing short of a small revolution in its reversal of race-gender inequalities in STEM. Carter’s statement about “twelve white men” being just as possible as “twelve Asian women” suggests an even playing field that allows individuals equal chance of rising to the top. It elides inequality in the program within larger unequal structures in STEM fields and industry that result from intersectional dimensions of identity—namely, that white men have been most successful and represented.

The other side of his equation articulates the idea of colorblindness, which assumes that things that have mattered historically should not matter in the present or future.

But what is more, (hetero)sexuality and (middle-) class status are silent signifiers in Carter's statement in the context of Med-Tech's institutional culture. For instance, during the interview process for the fellowship, sports jokes as index of shared identity often served as conversation starters with white male candidates, while questions about culture or country of origin initiated interviews with male or female candidates of color. Throughout our observations, we found that everyone either partook in, or had to act in relation to, performances of a competitive white American heteromascularity, a standard of behavior set by a predominantly white, male, surgeon faculty. Faculty often reproduced this culture through body language, such as taking up space in sitting poses where they leaned far back in chairs, legs crossed, arms crossed behind their heads;<sup>6</sup> and making jokes or commentary, such as what not to tell your wife or why high Cesarean-section rates reveal that women do not have family values when they "schedule" birth as part of their busy work lives.

Med-Tech leaders articulate qualities that are often associated with having experienced adversity as desirable traits for innovators, such as perseverance and grit. Martin told us that the questions that drive him when he selects fellows, who are all meritorious, are "How hungry are you? How bad do you want to do this?...The hunger itself is usually what drives you." Martin does not specify how he assesses someone's hunger, but Carter said, "I think that you get a sense of somebody in that first minute of discussion. You just get a sense for people. I don't know if it's worth trying to dissect exactly what happens there, but you get a sense of how clever they are and how they interact with people." For him, being the right fit thus derives from an intuitive yet unquestioned understanding of people.

Representing a prestigious US research institution, these leaders in medical innovation articulate perspectives on diversity and finding the right fit for CTS teams: women add value through the female perspective; lower conflict on teams; the right fit demands difference, but too much difference disrupts social cohesion and requires bridging. The traditional lack of diversity in STEM fields, an adherence to merit and unquestioned intuitions about the right fit or the right kind of hunger explain and determine Med-Tech's composition. Below, we describe how these perspectives impact innovators who arrive with the mark of

diversity.

## Gendered Expectations, Institutional Culture, and the Ideal of a Flat Hierarchy

In our first year of research, women were in the minority in the program overall and on each team of fellows. But even with gender parity in our second year of observation, the institutional culture persisted, matching not just the cited expectations of women's contributions but also patterns of exclusion and sexism in the program. For instance, a team meeting toward the end of the fellowship follows an exchange about team roles between Ronald and Mary, an engineer and innovation fellow:

R [sitting leaned far back with his arms crossed behind his head]: So what do you need before these gentlemen leave?

M describes her work on a cadaver.

R [interrupts]: How will you do the engineering aspect?

M [wide-eyed]: I'm an engineer. I'm technical. This is in my wheelhouse.

R [quickly]: I know you're an engineer. I wasn't sure if you were taking that role and wanted to hear it from you...if you can eat ramen for three years, fine. But if you have a first child, you might realize that this does not work for me. It's about personal timing.

M [wide-eyed]: I don't have kids.

R [interrupts]: Yeah, but generally, career wise, not everyone is born an entrepreneur, there's a lot of uncertainty.

When this exchange took place, Ronald had known Mary for the better part of a year and was deeply familiar with her project. Med-Tech specifically supports the building of entrepreneurial networks and strategies. This often entails advice, direction, and heroic stories about the endurance and resilience needed for an entrepreneurial lifestyle. In this exchange, Ronald questioned whether Mary would be able to endure long phases of financial insecurity, here indicated through his example of eating ramen, a cheap staple. Ronald expected Mary to take on the project manager's role on her team until she reminds him of her engineering background.

Mary told us, "My project management skills were more leveraged than anything, organizing the team, keeping them on task. That was leveraged and sometimes pushed on my team, but the engineering not as much." Ronald also suggested that there may be too much uncertainty in the entrepreneur lifestyle for her if she

plans on having a child. From our interviews with Mary, it was clear she had never discussed her desires or plans to have a family. She went on to tell us about her experience at Med-Tech vis-à-vis her teammate Jack:

Jack is one of my closest friends here and we tried having him say exactly the same thing as me ten minutes after I've said it and then it got discussed. As an experiment. Yeah, so if Jack...took the lead, if he drove conversation, he got listened to. And when I tried to do it, I didn't...The knowledge that I am female is made known to me every day...It's shocking, honestly. To come from these people that are so smart and so driven. There are times people don't speak to me; they speak to the boys. You tell me I drive the team and you're not going to look at me?

Faculty consistently addressed Mary in administrative matters. On technical questions, they addressed the men in the room, who usually did not participate in the organizational discussions. Mary went on to say,

It sounds like they identify people on each team that they think could be the leader...that's going to force everyone to do stuff...it's a male-dominated environment, right, I've never been around so much sexism in my life...I think that if you're going to identify leaders on a team and you're going to place those expectations on them without actually saying them out loud, you're just going to push for it...It wasn't until the last month when I started asking people what was going on and got accused of not doing my work...Basically, Martin said I'm the energy on my team and that when I don't do my work the team doesn't do its work. Okay, so you think I'm the energy on my team, yet you've been passive-aggressively telling me I'm not doing my job and been giving me no support in doing this...You put us on a flat hierarchy and then are putting pressure on me to lead a team.

We described above how women are expected to balance groups, to keep teams together. Here we see what this expectation meant for Mary, who had years of experience in the technology industry, as her expertise is downplayed and she is expected to perform gendered emotional labor (Hochschild, 1983). Mary told us about the impact these expectations had on her:

If you're going to put me in that role, give me the tools to do something about it and don't get mad at me when I drop out in February because I want to cry every day...Martin previously had made a comment...to the effect of I'm in charge of your recommendations so you'd better be nice to me...That was kind of the

gist of what came out of it. I was like, here's the five things that I think are wrong, here's ways I think you could change each of these things...Will they call me to do something or will they call Jack?

Standing at the beginning of a career in innovation, Mary had to consider the tradeoff between criticizing the program leadership versus gaining a reputation as troublemaker. When she opted to articulate her critiques, she was careful to suggest productive solutions.

Med-Tech is led by physicians, predominantly surgeons, who occupy the top of the clinical hierarchy, publish in prestigious biomedical journals, and repeatedly told us that the engineers in the fellowship fare better in those parts of the program when their expertise and skills are leveraged. We had hypothesized that Mary's experience was partially related to her engineering background. But Mary told us that she discussed this possibility with another fellow: "I was like, maybe because they're all doctors they're only looking at doctors. Nope, talked to some female doctors from the past and it happened to them, too...so that was kind of my litmus test." Another fellow named Hannah recounted her experience of presenting to a Med-Tech partner institution:

The NextGen people came in and [we] were pitching to them to get funding. And I'm the one pitching for my team and I'm sitting in the back and they're all joking about babies that were just had, and somebody was like, oh, at least you didn't have a girl...and they all laughed. I sit in the back, I'm like, there is a female present. And three people heard me and looked and were kind of taken aback, but most of them didn't hear me and then I get up to present and I'm like, hey, I'm the female contingent of your fellowship, how are you doing?

In our second year of research, we thought that program dynamics would change with a majority of women and higher proportion of female physicians in the fellowship. We wondered if Mary's efforts toward changing the program culture would show subtle effects. Indeed, it became nearly impossible for faculty to ignore women for the simple reason that there were more women than men in the room. Yet, Kate, a fellow in our second year of observation, told us about her distress in the first weeks of the program. In his presentation to the cohort, which we also observed, a peer introduced his background in plastic surgery by showing images of women who had breast augmentations that were clearly pulled from pornographic websites. Not only did the faculty not react, but Kate said that she realized that there was no institutional mechanism to handle what she in an interview described as "shocking and demoralizing...because in industry, you

know, right from the start, it's just a very professional culture and...you do trainings about sexual harassment and you know what to avoid." Kate continued, "I talked to a few of the female doctors and they were like, oh, I didn't even notice that. I've seen things like that happen so often in so many settings and they were...amazed that I was upset and that I would say something."

After much awkward avoidance on the part of the leadership, Kate ultimately spoke with two of the faculty who promised that changes would be instituted in the next year to ensure professional guidelines of conduct. However, they refused to bring up the incident with her cohort so as not to seem "reactionary." Kate concluded that the institution cared more about protecting the fellow who had presented the images, and making sure he would not be made uncomfortable, than about her discomfort and demoralizing experience. Even with gender parity, the sexist institutional culture persisted. In our interview, Kate rhetorically pointed out the lack of diversity on the faculty: "Why are all the faculty doctors? Why aren't there engineers on faculty? Why aren't there women on faculty? It just subconsciously makes you feel the image of success does not look like you." Kate's questions drive home the problem of effecting institutional change on diversity when the leadership level remains homogenous. Program leaders set the standard for institutional practices, and contribute to successful experiences of fellows diverse both in background and expertise. Change in her assessment needs to start with a faculty that also reflects these different levels of diversity.

**The ideal of the flat team: No hierarchies, just sexism?** Med-Tech borrows the notion of a "flat hierarchy" from Silicon Valley and start-up culture, where this idea became defined through a shared opposition to hierarchical structures of large American corporations and the embrace of flexibility and competitive entrepreneurial risk-taking (Saxenian, 1996). Flat hierarchies have indeed become an important paradigm for teamwork in innovation. At Med-Tech, the program faculty is embedded in a rigid hierarchy at the medical center but asserts a difference in the culture of the program as less formal, signaling access and open communication with fellows. For faculty, Med-Tech is a place to enjoy a more casual, creative, and flexible environment.

With few formal structures in the program for how faculty and students are to relate, and without official team leaders, background social hierarchies come fully to the fore: how dynamics will play out hinges essentially on personalities. As we saw, perceived force of personality such as "hunger" can take an essential role here. Program leaders are also embedded in a deeply hierarchical medical culture,

where leadership ranks are male-dominated, stereotypical expectations of women's tasks are the norm, and non-physicians struggle to be taken seriously (Good, 1995). Within the ostensibly flat structure, women in Med-Tech were expected to take a social role, which came at the expense of leveraging their technical expertise. We showed how this predicament impacted fellows as they had to work in unexpected ways to weigh career planning and reputation with the wish to change institutional culture. At Med-Tech, the flat hierarchy paradigm adopted from the neoliberal culture of Silicon Valley actually fostered gendered hierarchies: individuality is supposed to outweigh other factors, yet women were expected to perform emotional labor rather than their expert skills.

## Conclusion

In our study, the values and perspectives of a socially cohesive, unmarked innovation culture—the overwhelmingly white, male leadership of US academic medicine and innovation in the new field of CTS—moved to the foreground. Its profound cultural invisibility is the ideal workplace predicament, allowing expertise, experience, and individual personality to outshine any weighted identity markers that may or may not matter in collaborations (Gershon & Taylor, 2008; Gusterson, 1997; Traweek, 1988). By contrast, critical work in social science has shown how actors deemed diverse must negotiate their own presence vis-à-vis preconceived notions, legitimize the circumstances of their hiring or even their presence, often with detrimental effects (Abelmann, 2009; Ferguson, 2012; Iverson, 2007; Urciuoli, 1996). The persistent conceptual gap in the literature for describing the assumed neutrality of white men underscores the invisibility of the norm against which differences continue to be marked in scientific institutions and beyond (Haraway, 1988, 1997; Subramaniam, 2014).

Feminist science studies' own *sine qua non* was the question about, and intervention against, women's and (albeit not forcefully enough) ethnic and racial minorities' absence from science. Despite the emergence of diversity as shorthand for efforts to mitigate this situation, it has recently been argued that including diverse actors does not do away with legacies of inequality. Across universities, industries, and political discourse, diversity has been conceptualized as a set of neoliberal practices that can foster agency, but that also, paradoxically, naturalizes inequality (Ahmed, 2012; Dávila, 2001; Rosa & Bonilla, 2017; Shankar, 2015; Urciuoli, 2005). For instance, Bonilla & Rosa (2017) describe US diversity politics as having decoupled race from the legacies of colonialism, meaning that efforts for inclusion have come to take the place of demands to decolonize, and truly change, institutions. Shankar (2015) argues that diversity has become a

stand-in for inclusion that naturalizes race and ethnicity in the context of racial capitalism, a notion reflected in the cited literature that sees diverse actors as advantageous because they will grow the economy by producing more and better innovations, and in the Med-tech perspective that the purposeful addition of women will bring essential qualities to innovator teams. Urciuoli (2016) shows diversity to match neoliberal notions of selfhood that associate it with skills, leadership, and entrepreneurialism in US universities.

We might indeed grasp diversity as a kind of surveillance system, in the sense that it makes those who differ from contextual norms even more visible or veils persistent inequalities in institutions with great diversity scores (Subramaniam, 2014; Ahmed, 2012). Mary's assertion that at Med-Tech she learns every day that she is female and Kate's realization of how accustomed female physicians are to sexism illustrate these notions. We articulate an instance of what Ahmed (2012) identifies as the diversity paradox: that an institution that is perceived as successful in diversity can have a culture that is experienced as profoundly unequal. Med-Tech's institutional culture orients itself toward creating disruptive medical technologies for the future of healthcare, yet we encountered ideas about women as social and men as technical that seem anachronistic to the paradigm of innovation and team science. University administrations have made significant progress in fleshing out the details of mechanisms that support diversity (e.g. Garibay, 2014). We wonder if such measures might only scratch the surface to effect not a change in attitudes or a meaningful understanding of diversity but merely a more policed social environment.

At the intersection of the institutional worlds of academic medicine, science, and health and technology industries, we investigated a site associated with the technological advances that mark success on global markets in the US. Beyond a focus on individual intention, we highlighted the limits of calls for diversity as a driver of creative innovation in translational research. Diverse collaborators might cast a wider net by drawing on a broader range of perspectives and approaches. But adding diverse actors based on stereotypical expectations of their contributions here worked against innovators and their trajectories, and in this case reproduced sexist institutional culture. The articulated ideas about diversity revealed assumptions about women—in particular, expectations of women as social brokers. We described how conflicting ideas about diversity recapitulated gendered norms and how gendered expectations and limited conceptualizations of diversity as “balance” work in combination with the ideal of a flat hierarchy to stand in the way of collaboration, and detrimentally impact fellows' experiences in

Med-Tech. We showed articulations of diversity as potential economic or creative value or as balancing factor, a paradigm we revealed as entangled in faculty expectations about what exactly specific actors would contribute.

At Med-Tech, women of any background are often absent; women fellows in turn become marked as diverse actors expected to bring specific traits or expertise, while the homogeneous faculty leaders remain as unmarked as they are non-diverse. The program is situated in the neoliberal context of CTS, which aims to overcome barriers between disciplines and between academia and industry to speed up innovation. This context crystallized when Med-Tech leaders found an outlet in the program from the rigidity of clinical hierarchies, and a chance to bond with some but not all fellows. The lack of formal hierarchies presented new issues for those actors who came in marked as different, reacted to established norms and practices they rejected, and whose success was stymied or jeopardized by an ostensibly “flat hierarchy.”

Since the mid-1970s, US academic research has been rapidly subsumed under national economic policy and market demands in a new academic capitalism (Slaughter & Leslie, 1997). Technoscience is increasingly the university’s primary product and intellectual property its measure of success (Biagoli, Jaszi, & Woodmansee, 2011; McCray & Croissant, 2001). In translational research, the paradigm of seamless collaboration across disciplines and societal sectors articulates financially driven neoliberal policies to remove barriers between the university and industry and accelerate application via the market (Robinson, 2017). In consequence, the collaborations among experts that have long been a core theme of science studies have taken center stage in innovation studies and US national policy at a high level (Chompalov & Shrum, 1999; Hackett & Parker, 2016; Hoegl & Parboteeah, 2007). Teamwork, a key theme in the corporate sector, has been identified as a condition of innovation success (Urciuoli, 2005; Valantine, Beckerle, Reed, Towner, & Zahniser, 2014).

While the NIH (n.d.) has identified team science as a key element of CTS research, SciTS has formalized the value of productive collaborative multidisciplinary teamwork that transects academic and commercial boundaries into an academic field. SciTS focuses on applied policy research to aid collaborative output, and a community of researchers focused on the large-scale funding and programming requirements in US medical schools include team science components as a strategy for successful innovation. Yet, in the context of creating teams in translational research and innovation, institutional culture, within larger social

contexts, may itself be an obstacle to addressing intersecting dimensions of social difference across gender, race, class, and sexuality (Lee & Jabloner, 2017).

Clearly—and against Carter’s claim to meritocracy—diversity could only have become an issue against the backdrop of prior homogeneity. Not only does disciplinary homogeneity define this backdrop, but precisely the lack of social difference that continues to characterize the leadership ranks of the American academy, on the basis of which background social diversity became a demand (Subramaniam, 2014). Diversity shows “how certain words stick to certain bodies” (Ahmed, 2012, p. 62)—precisely those bodies that are not the institutional norm but marked as different before their arrival. At Med-Tech, diversity was most often related to the category of “women,” suggesting social difference in a context in which they are usually absent,<sup>7</sup> and indicating why race and other dimensions of intersectionality seemed absent. As a financial and creative aid to innovation, diversity took on a peculiar shape where gender diversity was seen as useful to the extent that it overlapped with stereotypes of femininity. Yet women’s increasing representation based on these stereotypes might enable a new gendered division of labor in CTS research.

But in the absence of concrete policy, the inclusion of those who are not the norm does matter. Even if reactionary ideas bubbled up, women’s increased presence at Med-Tech forced engagement with the meaning and value of diversity. In translational research, diversity paradoxically both crystallizes as a sign of an increasingly neoliberal academy, and signals as marker of social progress toward the inclusion of differently positioned actors. Evidently, diversity is not just about counting to include bodies that differ from institutional norms; it is clearly also about actually changing who leads and shapes American institutions in CTS innovation, and might indeed open up avenues for political agency (Shankar, 2015). To understand, in specific contexts, what diversity means and does in practice is a needed step toward institutional change.

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## Notes

<sup>1</sup> Diversity and inclusion have been institutionalized in US academia through deans of diversity, equity, and inclusion. See, for instance, Salama (2016).

<sup>2</sup> NIH Chief Diversity Officer Hannah Valentine created a public resource in the new “science of diversity”; see the NIH, Science of Diversity website, <https://diversity.nih.gov/science-diversity>.

<sup>3</sup> Questions like “how many women are in this room?” and “How many people of color are present?” account for demographics, but might also unwantedly ascribe gender, race, or other perceived characteristics to bodies counted as one category or another.

<sup>4</sup> All names are pseudonyms, and contextual and biographical details were altered to protect the privacy of our informants.

<sup>5</sup> The push for diversity in the US workplace originates in the political and moral terms of affirmative action and the civil rights movement. Intended to redress disadvantages stemming from historical oppression, affirmative action was widely contested and in historical consequence framed as reverse discrimination in American politics (Lipsitz, 2006).

<sup>6</sup> Grounded in Rebecca Solnit’s term “mansplaining,” this practice has become known as manspreading.

<sup>7</sup> This predicament is now specific to STEM fields, as feminist science studies has shown.

## References

Abelmann, N. (2009). *The intimate university: Korean American students and the problems of segregation*. Durham, NC: Duke University Press.

Abu-Lughod, L. (1986). *Veiled sentiments: Honor and poetry in a Bedouin society*. Berkeley, CA: University of California Press.

Ahmed, S. (2012). *On being included: Racism and diversity in institutional life*. Durham, NC: Duke University Press.

Bear, J., & Woolley, A. (2011). The role of gender in team collaboration and performance. *Interdisciplinary Science Reviews*, 36(2), 146-153.

- Bell, A., & Chetty, R. (2018, January 5). Exposure to innovation influences who becomes an inventor. *LSE Business Review*. Retrieved from <http://eprints.lse.ac.uk/id/eprint/88333>
- Biagoli, M., Jaszi, M., & Woodmansee, M. (2011). Introduction. In M. Biagoli, M. Jaszi, & M. Woodmansee (Eds.), *Making and unmaking intellectual property: Creative production in legal and cultural perspective* (pp. 1-22). Chicago, IL: University of Chicago Press.
- Bonilla-Silva, E. (2006). *Racism without racists: Color-blind racism and the persistence of racial inequality in the United States*. Lanham, MD: Rowman & Littlefield.
- Bozeman, B., & Boardman, C. (2014). *Research collaboration and team science: A state-of-the-art review and agenda*. New York, NY: Springer.
- Butler, J. (1990). *Gender trouble: Feminism and the subversion of identity*. New York, NY: Routledge.
- Carr, P. L., Gunn, C. M., Kaplan, S. A., Raj, A., & Freund, K. M. (2015). Inadequate progress for women in academic medicine: Findings from the National Faculty Study. *Journal of Women's Health, 24*(3), 190-199.
- Chompalov, I., & Shrum, W. (1999). Institutional collaboration in science: A typology of technological practice. *Science, Technology, and Human Values, 24*(3), 338-372.
- Collins, P. H. (2000). *Black feminist thought: Knowledge, consciousness, and the politics of empowerment*. New York, NY: Routledge.
- Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review, 43*(6), 1241-1299.
- Dávila, A. (2001). *Latinos, Inc.: The marketing and making of a people*. Berkeley, CA: University of California Press.
- Davis, A. (1981). *Women, race & class*. New York, NY: Random House
- de Beauvoir, S. (1952). *The second sex*. New York, NY: Vintage Books.
- Du Chatenier, E., Verstegen, J., Biemans, H., Mulder, M., & Omta, O. (2009). The challenges of collaborative knowledge creation in open innovation teams. *Human Resource Development Review, 8*(3), 350-381.
- Epstein, S. (2007). *Inclusion: The politics of difference in medical research*. Chicago, IL: University of Chicago Press.
- European Commission. (2013). *Gendered innovations: How gender analysis contributes to research*. Retrieved from <https://ec.europa.eu/programmes/horizon2020/en/news/%E2%80%99Cgendered->

[innovations-how-gender-analysis-contributes-research%E2%80%9D](#)

Falk-Krzesinski, H., Contractor, N., Fiore, S.M., Hall, K., Kane, C., Keyton, ... & Trochim, W. (2011). Mapping a research agenda for the science of team science. *Research Evaluation*, 20(2), 145-158.

Ferguson, R. (2012). *The reorder of things: The university and its pedagogies of minority difference*. Minneapolis, MN: University of Minnesota Press.

Ferguson, R. (2004). *Aberrations in black: Toward a queer of color critique*. Minneapolis, MN: University of Minnesota Press.

Forbes, Inc. (2011). Global diversity and inclusion: Fostering innovation through a diverse workforce. Retrieved from [https://i.forbesimg.com/forbesinsights/StudyPDFs/Innovation\\_Through\\_Diversity.pdf](https://i.forbesimg.com/forbesinsights/StudyPDFs/Innovation_Through_Diversity.pdf)

Garibay, J. (2014). Diversity in the classroom. Retrieved from <https://equity.ucla.edu/wp-content/uploads/2016/06/DiversityintheClassroom2014Web.pdf>

Gershon, I., & Taylor, J. (2008). Introduction to "In focus: Culture in the spaces of no culture." *American Anthropologist*, 110(4), 417-421.

Glenn, E. (2004). *Unequal freedom: How race and gender shaped American citizenship and labor*. Cambridge, MA: Harvard University Press.

Good, M. (1995). *American medicine: The quest for competence*. Berkeley, CA: University of California Press.

Gusterson, H. (1997). Studying up revisited. *PoLAR*, 20(1), 114-119.

Hackett, E., & Parker, J. (2016). From Salomon's house to synthesis centers. In T. Heinze & R. Munch (Eds.), *Innovation in science and organizational renewal* (pp. 53-87). New York, NY: Springer.

Haraway, D. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective. *Feminist Studies*, 14(3), 575-599.

Haraway, D. (1997). *Modest\_witness@Second\_millennium. FemaleMan\_meets\_OncoMouse: Feminism and technoscience*. New York, NY: Routledge.

Hochschild, A. (1983). *The managed heart: Commercialization of human feeling*. Berkeley, CA: University of California Press.

Hoegl, M., & Parboteeah, K. (2007). Creativity in innovative projects: How teamwork matters. *Journal of Engineering and Technology Management*, 24, 148-166.

hooks, b. 1981. *Ain't I a woman: Black women and feminism*. Boston, MA: South End

Press.

Iverson, S. (2007). Camouflaging power and privilege: A critical race analysis of university diversity policies. *Educational Administration Quarterly*, 43(5), 586-611.

Jolliff, L., Leadley, J., Coakley, E., & Sloane, R. A. (2012). Women in U.S. academic medicine and science: Statistics and benchmarking report 2011–2012. Retrieved from [https://www.hopkinsmedicine.org/women\\_science\\_medicine/\\_pdfs/women\\_in\\_u\\_s\\_academic\\_medicine\\_statistics\\_and\\_benchmarking\\_report\\_20112012.pdf](https://www.hopkinsmedicine.org/women_science_medicine/_pdfs/women_in_u_s_academic_medicine_statistics_and_benchmarking_report_20112012.pdf)

Joshi, A. (2014). By whom and when is women's expertise recognized?: The interactive effects of gender and education in science and engineering teams. *Administrative Science Quarterly*, 59(2), 202-239.

Lee, S., & Jabloner, A. (2017). Institutional culture is the key to team science. *Nature Biotechnology*, 35, 1212-1214.

Lipsitz, G. (2006). *The possessive investment in whiteness: How white people profit from identity politics*. Philadelphia, PA: Temple University Press.

Lorde, A. (1984). *Sister outsider*. Berkeley, CA: Crossing Press.

Lutz, C. (1988). Engendered emotion: Gender, power, and the rhetoric of emotional control in American discourse. In C. Lutz & L. Abu-Lughod (Eds.), *Language and the politics of emotion* (pp. 69-91). Cambridge, UK: Cambridge University Press.

M'charek, A., Schramm, K., & Skinner, D. (2014). Technologies of belonging: The absent presence of race in Europe. *Science, Technology, & Human Values*, 39(4), 459-467.

McCray, P., & Croissant, J. (2001). Entrepreneurship in technology transfer offices: Making work visible. In J. Croissant & S. Restivo (Eds.), *Degrees of compromise: Industrial interests and academic values* (pp. 55-76). Albany, NY: State University of New York Press.

Mohanty, C. (1991). Under Western eyes: Feminist scholarship and colonial discourses. In P. Williams & L. Chrisman (Eds.), *Colonial discourse and post-colonial theory* (pp. 197-220). New York, NY: Columbia University Press.

Moore, H. (1988). *Feminism and anthropology*. Minneapolis, MN: University of Minnesota Press.

National Institutes of Health (NIH). (n.d.). Grants overview information. Retrieved from <https://grants.nih.gov/grants/guide/rfa-files/rfa-rm-09-004.html>

National Institutes of Health (NIH). (2018). Great Minds Think Differently. Retrieved from [https://diversity.nih.gov/sites/coswd/files/images/2018\\_06/SWD\\_StrategicPlan\\_layout\\_final\\_links-508c.pdf](https://diversity.nih.gov/sites/coswd/files/images/2018_06/SWD_StrategicPlan_layout_final_links-508c.pdf)

National Institutes of Health, Office of the Director. (2016). Hubs of innovation: An NIH-led public-private diversity partnership. Bethesda, MD: NIH.

Nielsen, M. W., Alegria, S., Börjeson, L., Etzkowitz, H., Falk-Krzesinski, H., Joshi, A., ... & Schiebinger, L. (2017). Gender diversity leads to better science. *Proceedings of the National Academy of Sciences*, *114*(8), 1740-1742.

Reardon, J. (2004). Decoding race and human difference in a genomic age. *Differences: A Journal of Feminist Cultural Studies*, *15*(3), 38-65.

Reiter, R. (Ed.). (1975). *Toward an anthropology of women*. New York, NY: Monthly Review Press

Robinson, M. (2017). Science, risk and an emergent political economy of biomedical innovation. In D. Tyfield, R. Lave, S. Randalls, & C. Thorpe (Eds.), *The Routledge handbook of the political economy of science* (pp. 249-262). New York, NY: Routledge.

Rosa, J., & Bonilla, Y. (2017). Deprovincializing Trump, decolonizing diversity, and unsettling anthropology. *American Ethnologist*, *44*(2), 201-208.

Rosaldo, M. Z., & Lamphere, L. (Eds.). (1974). *Women, culture & society*. Stanford, CA: Stanford University Press.

Salama, M. (2016, April 7). Princeton hires first dean for diversity and inclusion. *Insight into Diversity*. Retrieved from <http://www.insightintodiversity.com/princeton-hires-first-dean-for-diversity-and-inclusion/>

Salazar, M. R., Lant, T. K., & Fiore, S. M. (2012). Facilitating innovation in diverse science teams through integrative capacity. *Small Group Research*, *43*(5), 527-558.

Saxenian, A. (1996). *Regional advantage: Culture and competition in Silicon Valley and Route 128*. Cambridge, MA: Harvard University Press.

Schiebinger, L., & Schraudner, M. (2011). Interdisciplinary approaches to achieving gendered innovations in science, medicine, and engineering. *Interdisciplinary Science Reviews*, *36*(2), 154-167.

Shankar, S. (2015). *Advertising diversity: Ad agencies and the creation of Asian American consumers*. Durham, NC: Duke University Press.

Slaughter, S., & Leslie, L. (1997). *Academic capitalism: Politics, policies, and the entrepreneurial university*. Baltimore, MD: Johns Hopkins University Press.

Smith, D. (2005). *Institutional ethnography: A sociology for people*. Lanham, MD: Altamira Press.

Spade, D. (2013). Intersectional resistance and law reform. *Signs: Journal of Women in Culture and Society*, *38*(4), 1031-1055.

Spivak, G. (1988). Can the subaltern speak? In C. Nelson & L. Grossberg (Eds.), *Marxism and the interpretation of culture* (pp. 271-313). Urbana, IL: University of Illinois Press.

Stokols, D., Hall, K. L., Taylor, B. K., & Moser, R. P. (2008). The science of team science: Overview of the field and introduction to the supplement. *American Journal of Preventive Medicine*, 35(2S), S77-S89.

Strathern, M. (1988). *The gender of the gift*. Berkeley, CA: University of California Press.

Subramaniam, B. (2014). *Ghost stories for Darwin: The science of variation and the politics of diversity*. Urbana, IL: University of Illinois Press.

Traweek, S. (1988). *Beamtimes and lifetimes: The world of high energy physicists*. Cambridge, MA: Harvard University Press.

Urciuoli, B. (1996). *Exposing prejudice: Puerto Rican experiences of language, race, and class*. Boulder, CO: Westview Press.

Urciuoli, B. (2005). Team diversity: An ethnography of institutional values. In A. Meneley & D. Young (Eds.), *Auto-ethnographies: The anthropology of academic practices* (pp. 159-172). Peterborough, ON: Broadview Press.

Urciuoli, B. (2016). Neoliberalizing markedness: The interpellation of “diverse” college students. *HAU: Journal of Ethnographic Theory*, 6(3), 201-221.

Valantine, H. A., Beckerle, M. C., Reed, K. L., Towner, D., & Zahniser, N. (2014). Teaching corporate in college. *Science Translational Medicine*, 6(251), 251fs33.

Wilf, E. (2019). *Creativity on demand: The dilemmas of innovation in an accelerated age*. Chicago, IL: University of Chicago Press.

Zerhouni, E. (2006). Clinical research at a crossroads: The NIH roadmap. *Journal of Investigative Medicine*, 54(4), 171-173.

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